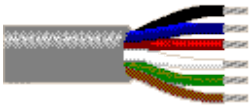
Detailed Specifications & Technical Data

ENGLISH MEASUREMENT VERSION

9421 Multi-Conductor - Audio, Control and Instrumentation Cable



Description:

22 AWG stranded (7x30) tinned copper conductors, conductors cabled, PVC insulation, PVC Jacket.

Physical Characteristics (Overall)

Conductor

AWG:

# Conductors	AWG	Stranding	Conductor Material
8	22	7x30	TC - Tinned Copper

Insulation

Insulation Material:

Insulation Material	Wall Thickness (in.)
PVC - Polyvinyl Chloride	.010

Outer Shield

Outer Shield Material:

Outer Shield Material
Unshielded

Outer Jacket

Outer Jacket Material:

Outer Jacket Material	Nom. Wall Thickness (in.)
PVC - Polyvinyl Chloride	.032

Overall Cabling

Overall Cabling Lay Length & Direction:

Length (in.)
3.50

Overall Cabling Color Code Chart:

Color
Black
White
Red
Green
Brown
Blue
Orange
Yellow

Overall Nominal Diameter:	0.229 in.

Mechanical Characteristics (Overall)

Operating Temperature Range:	-20°C To +80°C
UL Temperature Rating:	80°C (UL AWM Style 2576)
Bulk Cable Weight:	34.500 lbs/1000 ft.
Max. Recommended Pulling Tension:	71 lbs.
Min. Bend Radius (Install)/Minor Axis:	2.300 in.

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CMG
CEC/C(UL) Specification:	CMG
AWM Specification:	UL Style 2576 (150 V 80°C)
CSA Specification:	FT4
EU CE Mark:	Yes
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	04/01/2005
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes

Plenum/Non-Plenum

Plenum (Y/N):	No

Electrical Characteristics (Overall)

Nom. Inductance:

Inductance (µH/ft)
.17

Nom. Capacitance Conductor to Conductor:

Capacitance (pF/ft)
34

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
15.6

Max. Operating Voltage - UL:

Voltage
300 V RMS (CMG)
150 V RMS (UL AWM Style 2576)

Max. Recommended Current:

Current
2.1 Amps per conductor @ 25°C

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
9421 060U1000	1,000 FT	35.000 LB	CHROME		8 #22 PVC PVC
9421 060U500	500 FT	18.500 LB	CHROME		8 #22 PVC PVC
9421 060100	100 FT	4.100 LB	CHROME		8 #22 PVC PVC
9421 0601000	1,000 FT	38.000 LB	CHROME	C	8 #22 PVC PVC
9421 060500	500 FT	18.000 LB	CHROME	C	8 #22 PVC PVC

Notes:
C = CRATE REEL PUT-UP.

Introduction

Belden® multi-conductor cables are manufactured in a wide variety of gage sizes, dimensions, insulation materials, shielding configurations, and jacketing materials including Plenum and High-Temperature versions. These cables meet the technical requirements of many different types of systems. In fact, Belden offers one of the broadest lines of UL Listed, NEC and CEC multi-conductor cables available from any single source.

Applications for multi-conductor cables include computers, communications, instrumentation, sound, control, audio, and data transmission. Each of these cables is designed to protect signal integrity under critical conditions by reducing hum, noise, and crosstalk.

To assist you in selecting the proper cable for your application, both the suggested working voltages and the maximum temperature ratings are indicated for each applicable product in this section.

Most of our multi-conductor cables are available from stock. Many of these are available off the shelf from distributors. If you have a new or unusual application or you cannot find a multi-conductor cable in this catalog section that meets your technical requirements, contact Technical Support at 1-800-BELDEN-1.

Multi-Conductor Cables Packaging

Belden's unique UnReel® cable dispenser is available for many of the multi-conductor products listed in this section. The letter "U" before the specified put-up length denotes UnReel packaging.

Selection Guide

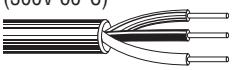
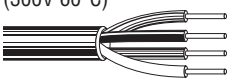
Shielded Multi-Conductor Computer Cables for RS-232 Applications

Specifications			Cable Series* 9925	9608	9533	9939
Conductor Size: (AWG)		28				
		24	✓	✓	✓	
		22				✓
		20				
		18				
		Page No.	4.18	4.17	4.11	4.19
Insulation:	S-R PVC			✓	✓	✓
	Polyethylene					
	Polypropylene					
	Datalene®†		✓			
Shield:	Overall Foil				✓	
	Drain Wire		✓		✓	
	Overall Foil/Braid		✓	✓		✓
	Braid Coverage		65%	65%		65%
Drain Wire Overall:			Yes	No	Yes	No
No. of Cond. Available:		1				
		2				
		3	✓	✓	✓	✓
		4	✓	✓	✓	✓
		5	✓	✓	✓	✓
		6	✓	✓	✓	✓
		7	✓	✓	✓	✓
		8	✓	✓	✓	✓
		9	✓	✓	✓	✓
		10	✓	✓	✓	✓
		11				
		12				
		13				
		15	✓	✓	✓	✓
		17				
		18				
		19				
		20			✓	
		25	✓	✓	✓	✓
		27				
		30			✓	
		31				
		37	✓	✓		✓
		40			✓	
		50		✓	✓	✓
Capacitance ** (pF/ft.)			12.0	30.0	30.0	35.0

*All cables are UL-listed.
**Capacitance may vary on some cables.
†Foam high density polyethylene.

Unshielded

Audio, Control and Instrumentation Cables
Non-Plenum

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Cond.	Color Code	Standard Lengths		Standard Unit Weight		Insulation Thickness		Jacket Thickness		Nominal OD	
					Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Inch	mm
22 AWG Solid Bare Copper Conductors • Conductors Cabled														
Polyethylene Insulation • Rose Gray PVC Jacket														
UL AWM Style 2092 (300V 60°C) 	**8795**	NEC: CM CEC: CM	2	Red, Green	U-500 U-1000 1000	U-152.4 U-304.8 304.8	10.0 19.0 17.0	4.5 8.6 7.8	.018	.46	.022	.56	.168	4.27
UL AWM Style 2093 (300V 60°C) 	**8794**	NEC: CM	3	Green, Red, Yellow	U-1000 1000	U-304.8 304.8	22.0 21.0	10.0 9.6	.018	.46	.022	.56	.178	4.52
UL AWM Style 2094 (300V 60°C) 	**9794**	NEC: MP, CM	4	Green, Red, Yellow, Black	U-500 U-1000 1000	U-152.4 U-304.8 304.8	14.0 26.0 25.0	6.4 11.8 11.4	.018	.46	.025	.64	.200	5.08
UL AWM Style 2094 (300V 60°C) 	**1242A**	NEC: CM CEC: CM	4	Green, Red, Yellow, Black	U-1000	U-304.8	16.0	7.2	.018	.46	.025	.64	.154	3.91
22 AWG Stranded (7x30) Tinned Copper Conductors • Conductors Cabled														
PVC Insulation • Chrome PVC Jacket														
 *Twisted pair	**8442***	NEC: CMG CEC: CMG FT4	2	Black, Red	100 U-500 500 U-1000 1000 10000 †	30.5 U-152.4 152.4 U-304.8 304.8 3048.0	2.4 8.0 7.5 15.0 15.0 150.0	1.1 3.7 3.4 6.8 6.8 68.2	.015	.38	.025	.64	.170	4.32
											For Plenum versions of 8442, see 88442 or 82442.			
UL AWM Style 2576 (150V 80°C) 	**8443**	NEC: CMG CEC: CMG FT4	3	Black, Red, Green	100 U-500 500 U-1000 1000	30.5 U-152.4 152.4 U-304.8 304.8	2.7 9.5 9.5 18.0 18.0	1.2 4.3 4.3 8.2 8.2	.010	.25	.032	.81	.172	4.37
	8444	NEC: CMG CEC: CMG FT4	4	See Chart 1 (Tech Info Section)	100 U-500 500 U-1000 1000	30.5 U-152.4 152.4 U-304.8 304.8	3.1 11.5 11.5 22.0 23.0	1.4 5.2 5.2 10.0 10.5	.010	.25	.032	.81	.185	4.70
											For Plenum versions of 8444, see 88444 or 82444.			
	8445	NEC: CMG CEC: CMG FT4	5	See Chart 1 (Tech Info Section)	100 U-500 500 U-1000 1000	30.5 U-152.4 152.4 U-304.8 304.8	3.5 13.5 13.5 25.0 26.0	1.6 6.1 6.1 11.4 11.8	.010	.25	.032	.81	.194	4.93
	9430	NEC: CMG CEC: CMG FT4	7	See Chart 1 (Tech Info Section)	U-500 500 U-1000 1000	U-152.4 152.4 U-304.8 304.8	17.0 17.0 32.0 34.0	7.7 7.7 14.5 15.9	.010	.25	.032	.81	.214	5.44
	9421	NEC: CMG CEC: CMG FT4	8	See Chart 1 (Tech Info Section)	100 U-500 500 U-1000 1000	30.5 U-152.4 152.4 U-304.8 304.8	4.2 19.0 18.5 36.0 38.0	1.9 8.7 8.4 16.3 17.2	.010	.25	.032	.81	.229	5.82
	9423	NEC: CMG CEC: CMG FT4	9	See Chart 1 (Tech Info Section)	100 U-500 500 U-1000 1000	30.5 U-152.4 152.4 U-304.8 304.8	4.7 21.0 21.5 41.0 43.0	2.1 9.6 9.8 18.6 19.5	.010	.25	.032	.81	.244	6.20
	8456	NEC: CMG CEC: CMG FT4	10	See Chart 1 (Tech Info Section)	100 U-500 500 U-1000 1000	30.5 U-152.4 152.4 U-304.8 304.8	5.0 22.5 23.0 44.0 46.0	2.3 10.2 10.5 20.0 20.9	.010	.25	.032	.81	.264	6.71

†Final put-up may vary -10% to +20%. May contain two pieces, minimum length of any one piece is 1500 ft.